**GROUND BOXES**

### MATERIALS

1. Provide polymer concrete ground boxes measuring 16x30x24 in. (WxLxH) or smaller in accordance with Departmental Material Specification (DMS) 11070 "Ground Boxes" and Item 624 "Ground Boxes".

2. Provide Type A, B, C, D, and E ground boxes as shown in the plans, and as listed on the Material Producers List (MPL) on the Department web site under "Roadway Construction" and "Electrical Supplies," Item 624.

3. Ensure ground box cover is correctly labeled in accordance with DMS 11070.

4. Provide larger ground boxes in accordance with Item 624 and as shown in the plans.

### CONSTRUCTION METHODS

1. Remove all gravel and dirt from conduit. Cap all conduits prior to placing aggregate and setting ground box. Provide a 3 or 4 pipe aggregate as shown on Table 3 of Appendix 2 for Ambient Surface Temperature. Ensure aggregate bed is at least 9 inches deep, prior to setting the ground box. Install ground box on top of aggregate.

2. Cast ground box aprons in place. Reinforcing steel may be field bent. Ensure the depth of concrete for the apron extends from finished grade to the top of the aggregate bed under the box. Ground box aprons, including concrete and reinforcing steel, are subsidiary to ground boxes when called for by descriptive code.


4. Install all conduits and accessories in a neat and workmanlike manner. Uniformity space conduits so grounding bushings and bell end fittings can easily be installed.

5. Temporarily seal all conduits in the ground box until conduits are installed.

6. Permanently seal conduit immediately after the completion of conductor installation and pull tests. Permanently seal the ends of all conduits with duct seal, expandable foam, or other method as approved. Do not use duct tape as a permanent conduit sealant.

7. When a ground rod is present in a ground box, bond all equipment grounding conductors together and to the ground rod with listed connectors.

8. When a type B or D ground box is stacked to meet volume requirements, it is allowable to cut an appropriately sized hole for conduit entry in the side wall at least 18 inches below grade.

9. If an existing ground box in the roadway has a metal cover, bond the cover to the equipment grounding conductor with a 3 ft. long stranded bonding jumper of #6 copper wire. Ensure existing ground box with metal covers are shown on the plans, with notes fully describing the work required.

10. If other ground boxes with metal covers are within the project limits but are not part of the project, the Contractor may direct the Contractor to bond the metal cover. The Contractor is responsible for identifying the specific boxes in writing, this work will be paid for separately.

11. Bond metal ground box covers to the grounding conductor with a tank ground type lug.